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Case Study

William Hill guarantees betting platform performance for the Grand National

eggPlant Performance enables
William Hill to simulate busiest day

Profile

Founded in 1934, William Hill has one of the most recognized, respected and trusted brands in the gambling industry. Employing more than 16,000 people in nine countries, the company continually works to transform its business, investing in new technology and innovation, and extending its vast product range to capture substantial growth and opportunities.

Sports betting is the largest and fastest growing section in the online gambling sector. Horse racing represents a significant proportion of the sports betting market. The Grand National race generates over £150 million making it the busiest day for betting companies in the UK.

The Problem: Load

As the UK's leading bookmaker and one of the most recognised and trusted brands in the gambling industry, it is imperative that William Hill is able to handle the load on its online sports betting platform for the Grand National day.

The load placed on William Hill's systems during the Grand National period is significantly different than for any other race, and is comparable with the load increases seen during Boxing Day sales for online retailers. The betting platform's infrastructure is hence significantly strengthened to support the workload, but performance testing this infrastructure is made more complex as it can only be conducted in live environments

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The Goal

William Hill set the goal of maximizing the uptime for the company's web and mobile sports betting applications around the Grand National betting period.

The company's performance testing solution comprised of Selenium web driver running on Grid with custom wrappers built to run from Amazon cloud instances. This testing solution was limited in terms of the accuracy of workload profiles, the repeatability and consistency of tests, and the scalability limitations of the tools.

"The key to achieving our goal was being able to simulate as best as possible the transactions and user journeys that would be seen on the Grand National day," said William Hill's SDET Manager. "To achieve this we needed to build a robust performance test framework using a tool that was flexible, scalable and capable of simulating large transactional volumes. And all of this with ability to script using Java – our preferred language of choice. We also needed a performance testing tool that would allow us to build an accurate and repeatable process to undertake tests on our live infrastructure."

eggPlant Performance selected

William Hill selected eggPlant Performance as its new performance test tool based on several of the product's key features, including scalability, reporting and Java language scripting. With its easy to use test script creation capabilities that allow Software Development Engineers in Test to quickly create powerful scripts, eggPlant Performance also delivers significant productivity advantages.

eggPlant Performance provides sophisticated performance and load testing capabilities that can test the widest range of technology and can scale up to simulate any load, but are still easy-to-use. The tool helps ensure that applications continue to work, perform, and provide an excellent server performance when being accessed and used by thousands of simultaneous users.

The forecast transactional volumes were focused on William Hill's key business transactions and a general profile of browsing activity in the background. The key business transactions consist of actions including bet placement, registration of new customers and depositing funds from a card into an account. Testing coverage ranged from web apps on desktop and mobile devices like iPhone and iPad.

As the performance tests were undertaken in live environments, numerous control procedures were put in place to ensure there was no impact to customers. Initially, about three tests were executed during the day but, as bottlenecks were resolved, tests became more complex and user numbers were tweaked for further increases in load. Gradually tests were executed on-demand and during the course of the project new transactional records were set almost on a daily basis.

"Ultimately, the testing load we generated using eggPlant Performance was more than the peak transactions compared to some of the world's busiest stock exchanges".

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Grand National Day 2015

In the build up to the 2015 Grand National, William Hill conducted a total of 50 performance tests over a span of 10 weeks, compared to just 15 tests over the same time during the previous year.

> "The consistency of tests in eggPlant Performance helped us ensure that fixes applied between tests, were working as intended".

On Grand National day, all of William Hill's betting systems coped with the workload and not a single high severity incident was raised. In all there were only two incidents for the entire day, and infrastructure remained stable.
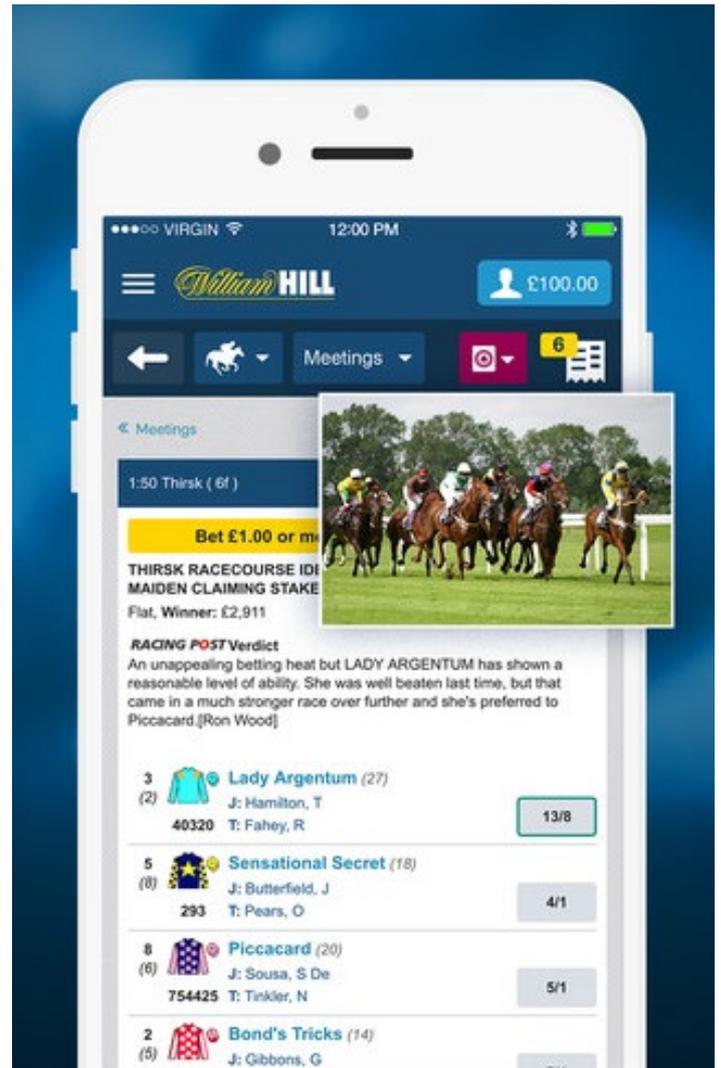
About TestPlant

TestPlant is an international software business based in London. It has development centers in the USA and the UK with sales and support centers in the USA, the UK, Germany, China and Japan as well as an extensive network of business partners. TestPlant's products are used in over 40 countries by well over 350 enterprise customers in sectors which include Financial Services, Automotive, Healthcare and Life Sciences, Media and Entertainment, Retail and Defense and Aerospace. The eggPlant range is a set of tools which supports the design, development, test and management of software applications for mainframe, desktop and mobile use in any technology platform environment. The tools are relevant in agile, mobile, web and DevOps deployments. eggPlant use improves and reports on the quality and responsiveness of software systems, reduces time to market and lowers costs by introducing process automation. The eggPlant tools have been granted patents in the USA and in Europe. TestPlant is a Red Herring Global Top 100 company, a Deloitte UK Technology Fast 50 and EMEA 500 business, a member of the Sunday Times Hiscox Tech Track 100 and is the recipient of two Queen's Awards for Enterprise. The Carlyle Group is a major investor in the company.

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